Oracle Academy Application Express Learner Guide

Contents

1. Introduction

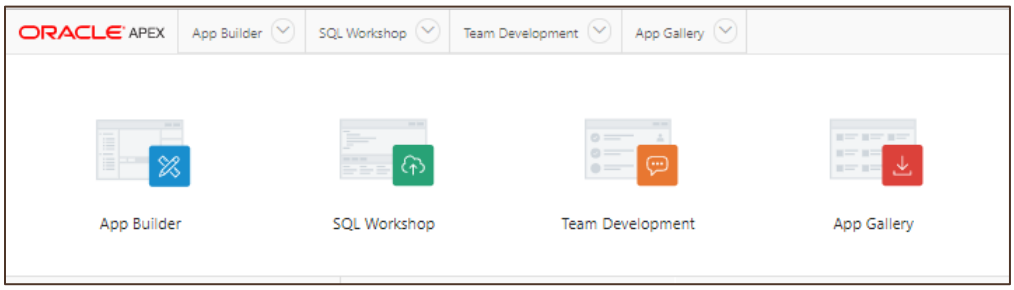
This document will help Oracle Academy Learners and instructors become familiar with how to use Oracle Application Express and each of its components from an end user's perspective. If you would like to learn more about the teacher capabilities of Oracle Application Express, please refer to the Oracle Application Express – Teacher Guide.

2. Logging in to Oracle Application Express

Please check with your teacher for APEX logon instructions.

3. Oracle Application Express Components

Once you log into Oracle Application Express you will see the Oracle Application Express home page. This page displays all of the components of Oracle Application Express: Application Builder, SQL Workshop, Team Development and App Gallery.



- Application Builder: Allows you to create, view or monitor applications.
- SQL Workshop: You can create, manage, and view the database objects from a Web browser using SQL Workshop.
- Team development: facilitates the management of the application development process.
- App Gallery: a suite of business productivity applications.

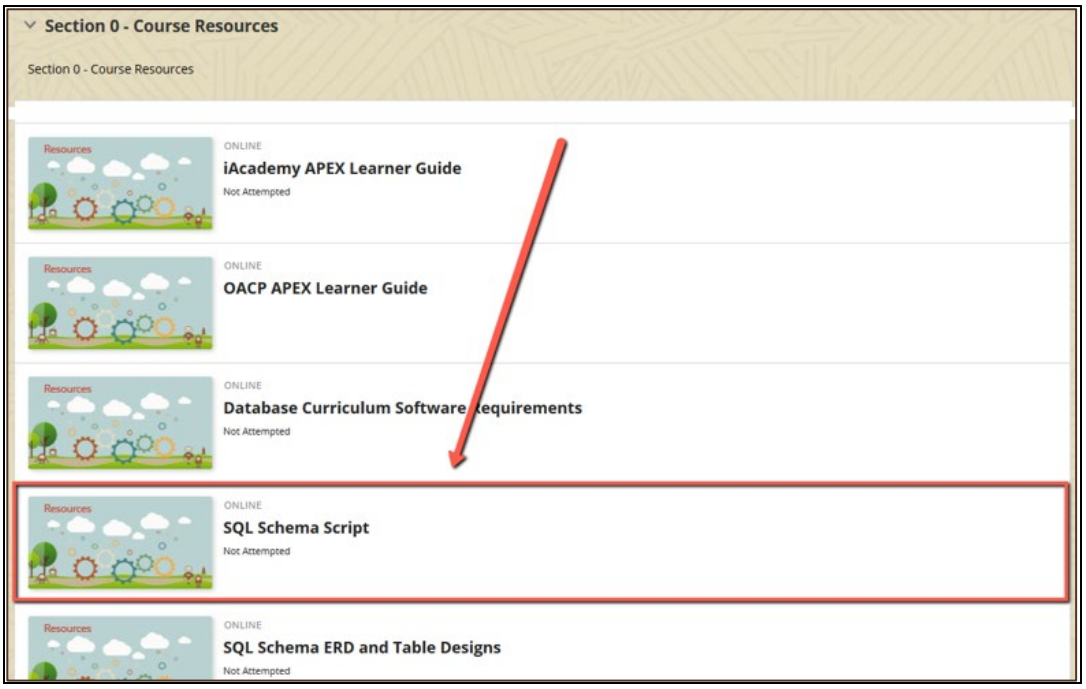
SQL Workshop is the main component that is used with the Database Programming with SQL and PL/SQL course curriculum. Note that the tabs at the top of the page provide quick access to these components.

4. How to add tables and data to APEX accounts

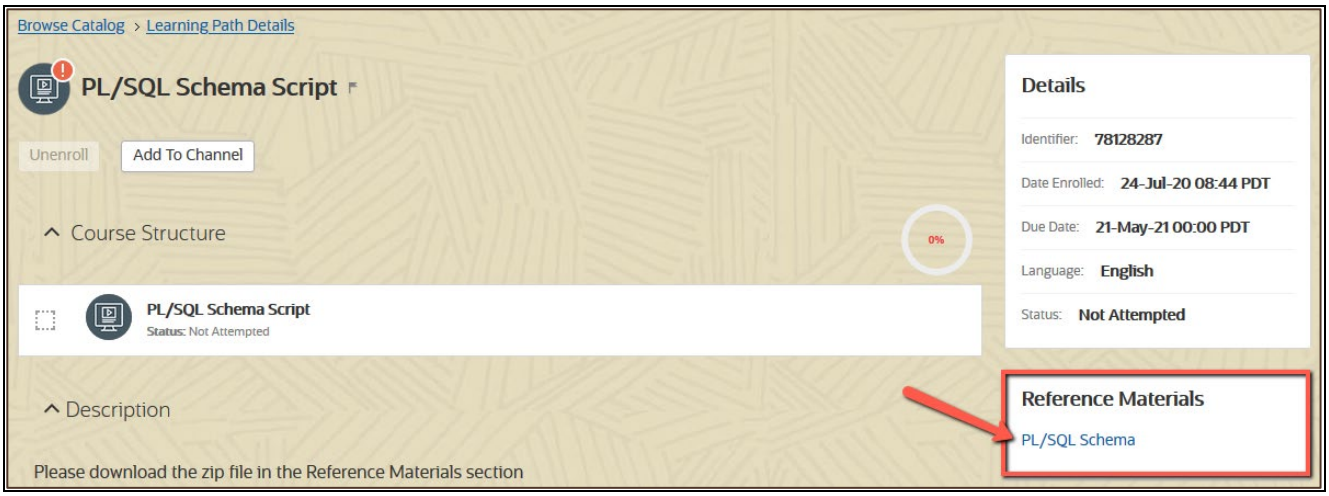
In order to have access to the tables and data used throughout the course a Script file, that can be accessed in the Member Hub, must be run in the teacher account and all Learner accounts.

The teacher should do this as a “run-through” with the class following the instructions below. This method insures that Learners understand and can download and run the scripts in their own schemas.

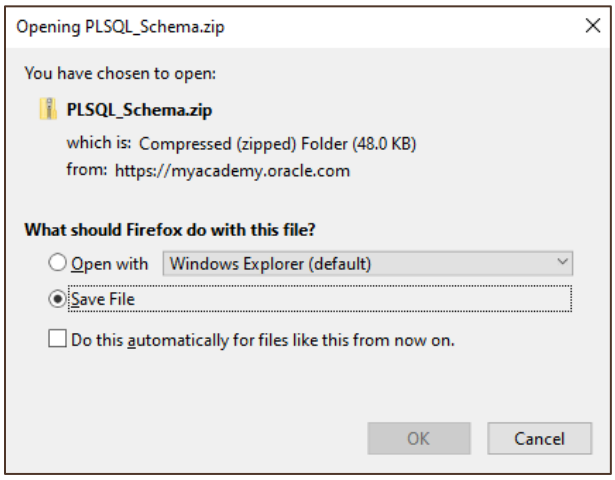
1. To obtain the script file go to the Section 0 – Course Resources of the Learner – Learning Path for the course and select the desired script.



Click the link in the Reference Materials area to Save the file to your local computer.

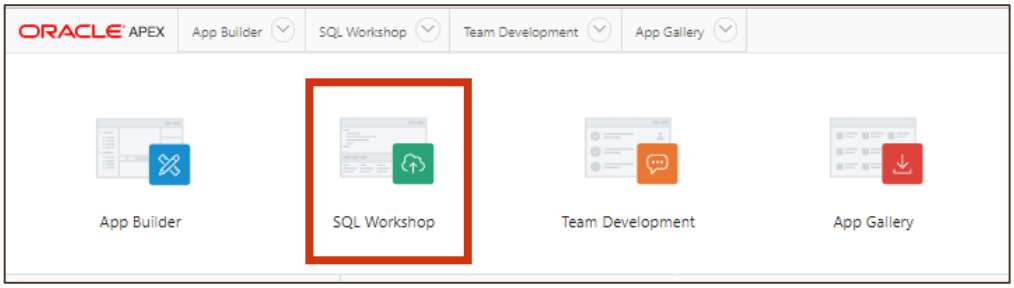


Once saved, unzip the file.

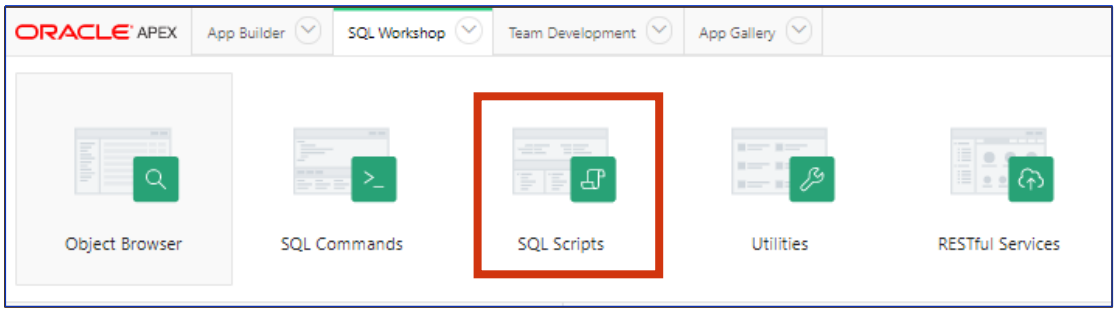


2. Open APEX in your browser and login.

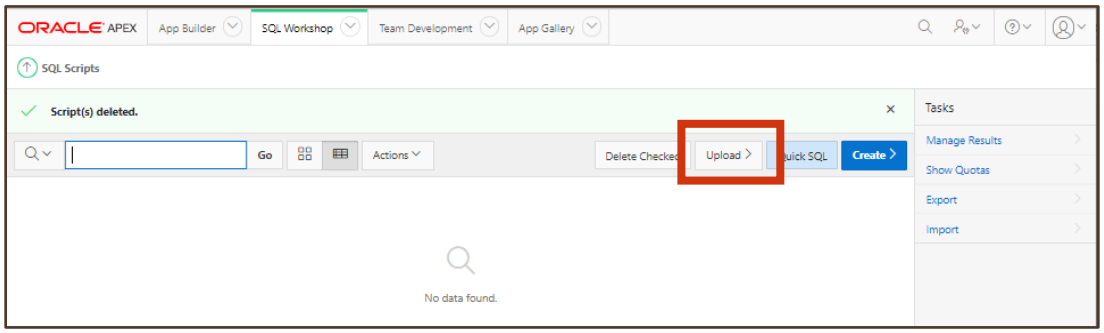
3. Select “SQL Workshop”



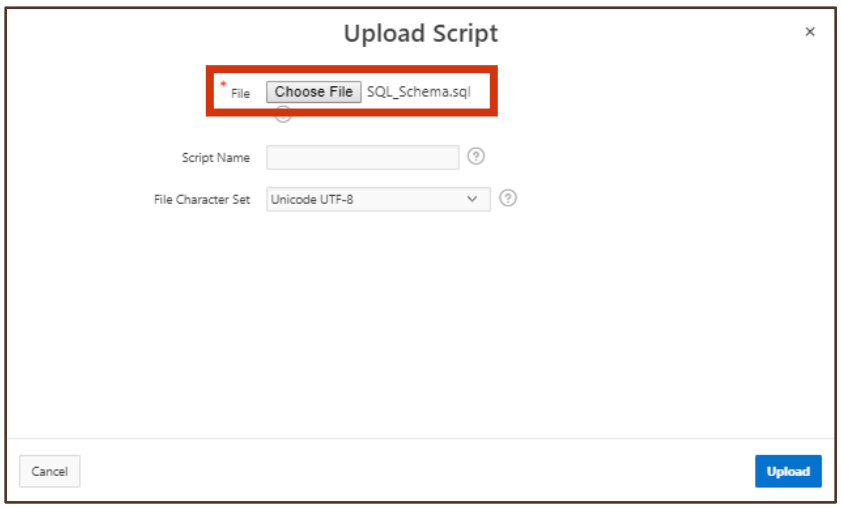
4. Select “SQL Scripts”



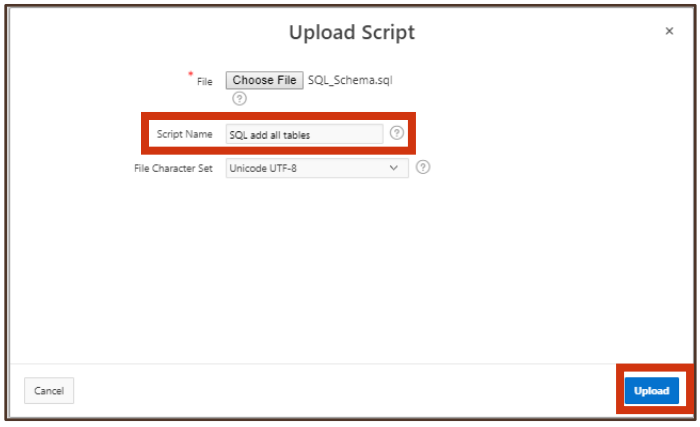
5. Click “Upload”



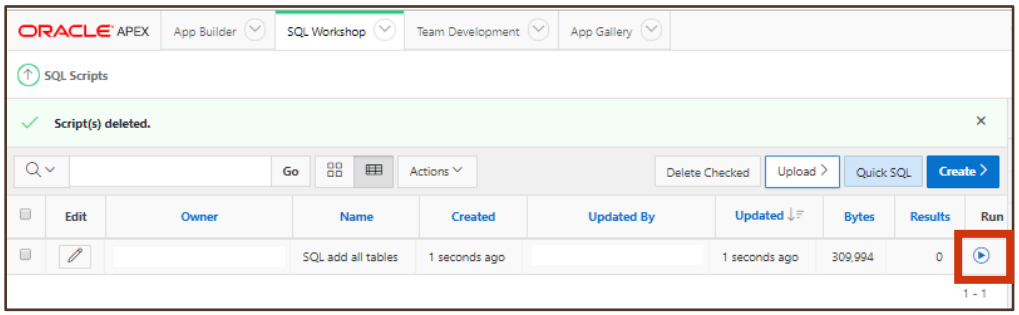
6. Click Choose File and navigate to the file you downloaded from in Step 1.



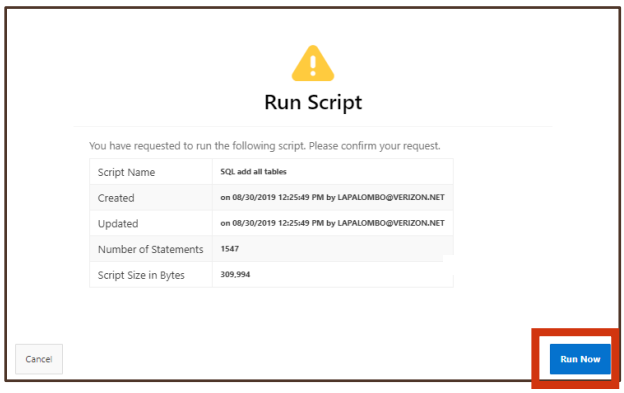
7. Add a Script Name - “SQL add all tables” or “PLSQL add all tables”, leave “File Character Set” as default (Unicode UTF-8), and click “Upload”.



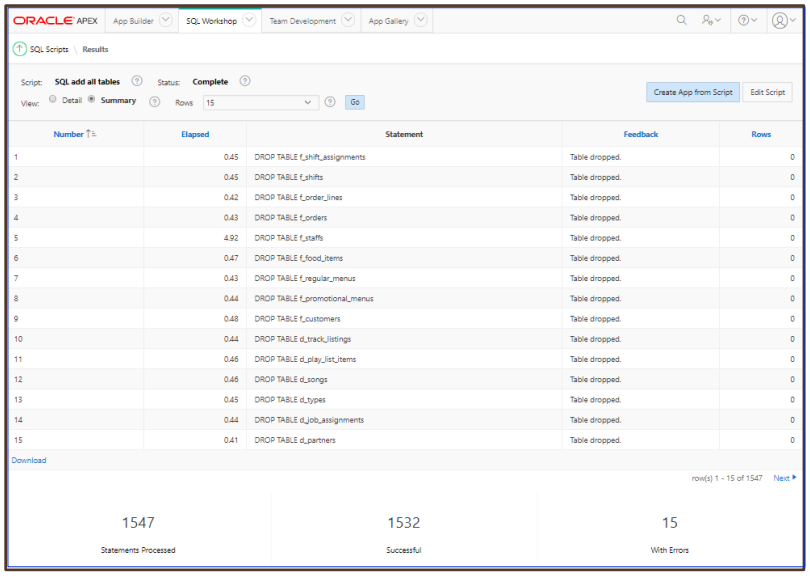
8. You will now see the Script listed. Click the Run icon.



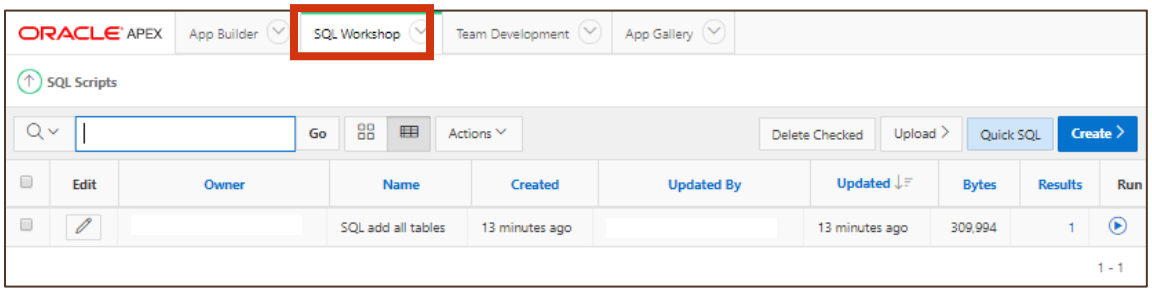
9. Click “Run Now”



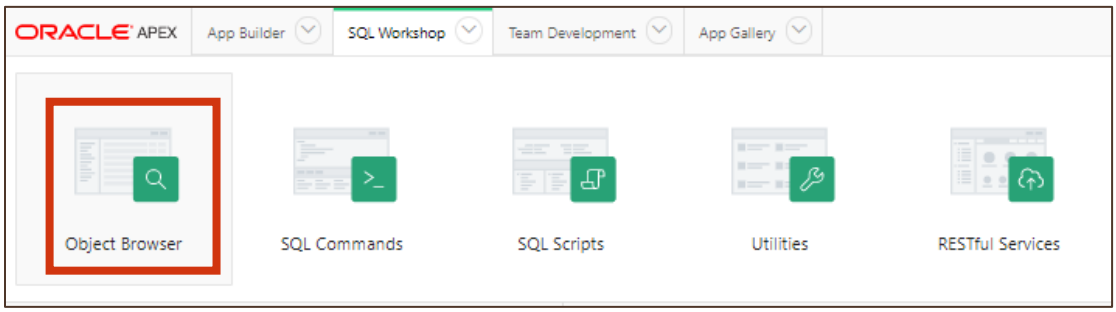
10. You can view the results, however, your first attempt to run the script will generate errors on the DROP statements due to the tables not already existing in the schema.



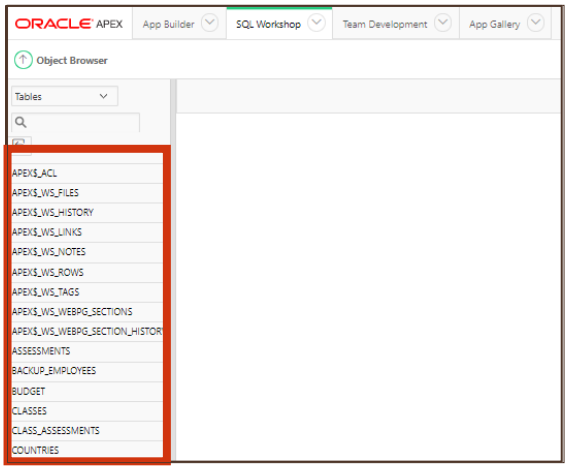
11. Click the “SQL Workshop” tab



12. Click “Object Browser”



13. You should now see the tables listed on the left of the Object Browser page. These are the tables (and data) that will be used in the curriculum for your course(s).

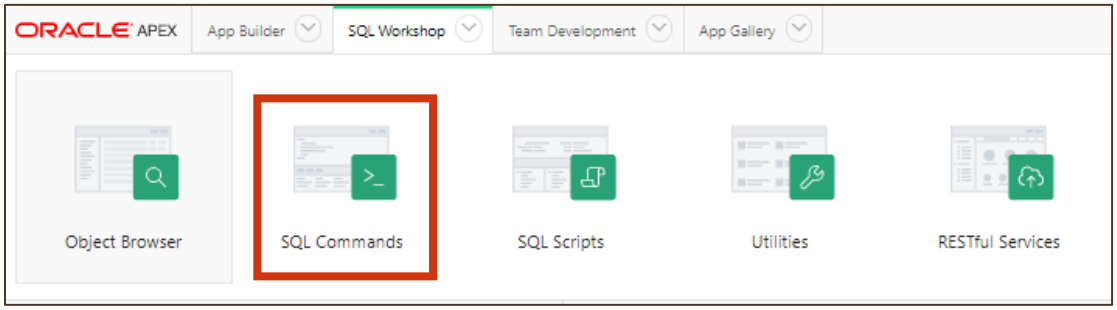


NOTE: The Script can be run again at a later date to revert the schema to its original state in the event of accidently modifying or deleting data.

5. Using SQL Commands from the SQL Workshop Component

Click on the SQL Workshop icon. On the SQL Workshop home page you will see the five tools available from SQL Workshop:

- Object Browser
- SQL Commands
- SQL Scripts
- Utilities
- Restful Services

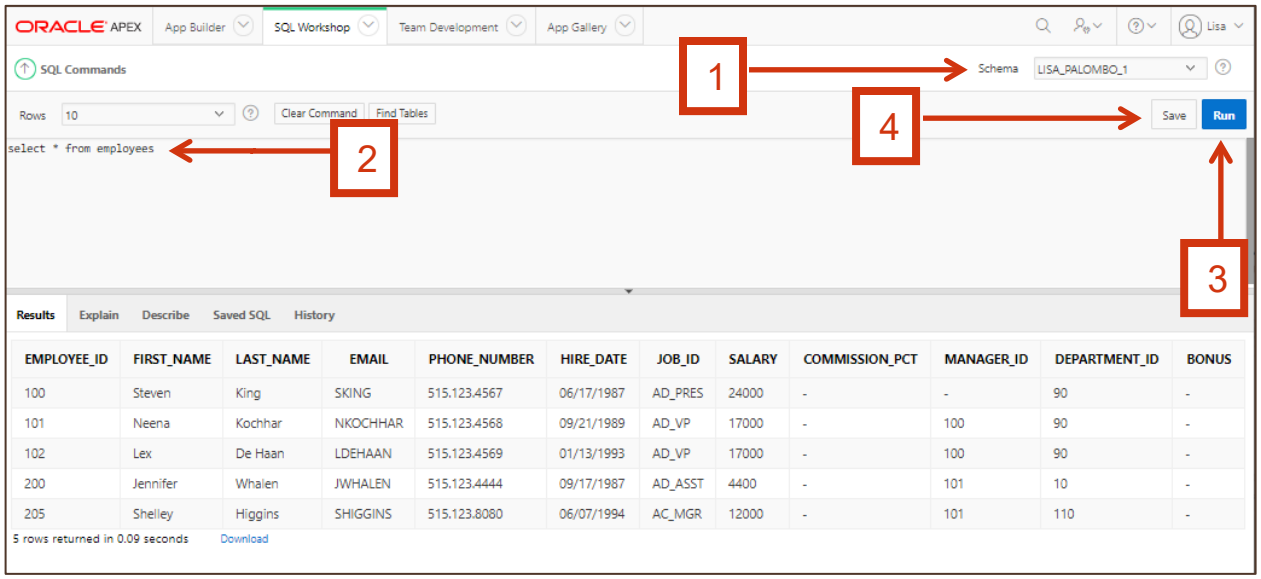


The SQL Commands icon will link to where you will enter and practice SQL and PL/SQL coding in the Database Programming with SQL or PL/SQL course. You can use the SQL Command tool to run SQL or PL/SQL statements on any Oracle database schema to which you have access privileges.

6. General Overview SQL Command Window

Refer to the graphics below for information about the SQL Command window:

1. Schema: The drop down menu only displays the schemas to which you have been granted access.
2. Statement window: Type SQL or PL/SQL commands in this window.
3. Run SQL button: Click this button to execute the SQL or PL/SQL statement.
4. Save button: You have the ability to run your SQL or PL/SQL statement or save it for future use. To limit the number of times you enter a common SQL or PL/SQL statement, save the statement by clicking the Save button.



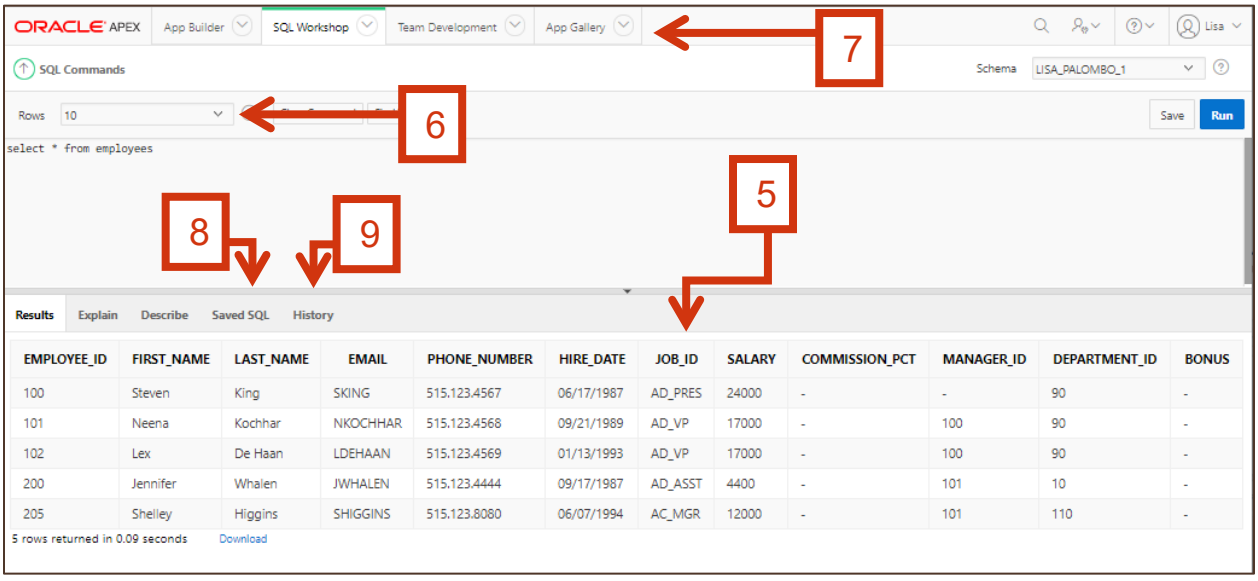
5. After a SQL or PL/SQL statement is executed, the results are displayed in the Results window. An error message displays if there is a problem with the SQL or PL/SQL command.

6. Rows: The Rows drop down menu lets you select the number of rows you would wish to display.

7. Tabs: The tabs can quickly take you back to any of the 4 main components of the Oracle Application Express.

8. Saved SQL: Click on this button to display your list of saved SQL and PL/SQL commands.

9. History: Displays a list of the recently executed SQL and PL/SQL commands.



Additional features to note about the Results window (see Graphic below):

1. If you want to create a file of the output results:

   a. Click on the “Download” link

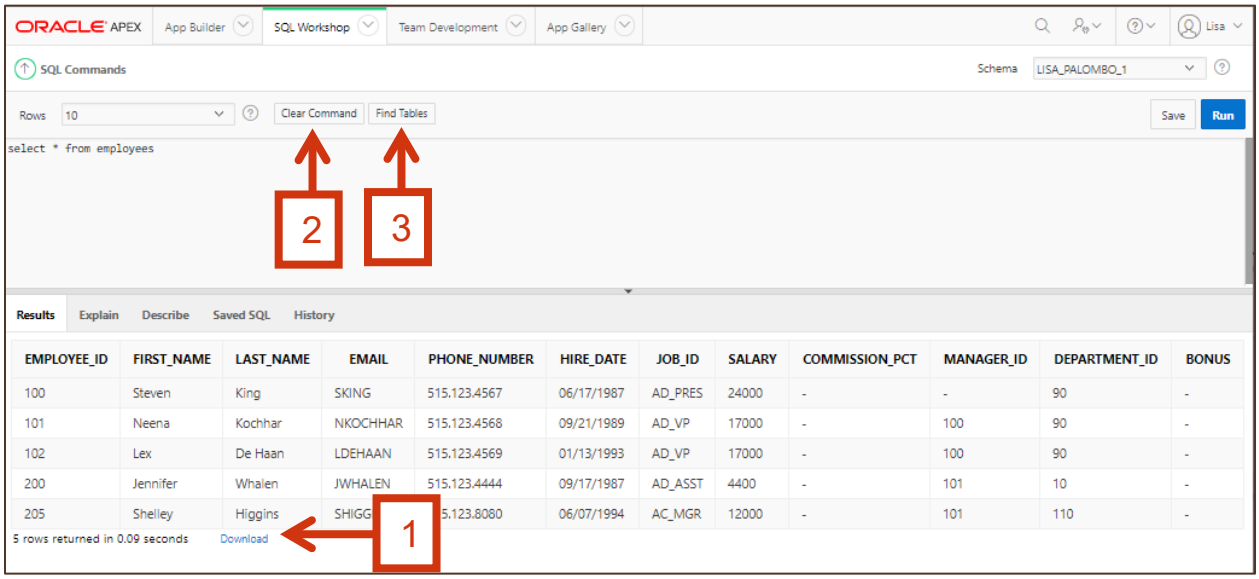
b. A Pop-up window will appear. Select from “open or save this file”

c. If you select “open” then it will open the results in a Microsoft Excel spreadsheet. From Microsoft Excel you can then do a “save as” to save the file in this format.

d. If you select “save” then it will save it as a .csv (comma separated value) file. A pop-up will allow you to select the saved filename and location.

2. Click on the “Clear Command” button to clear the Statement Window.

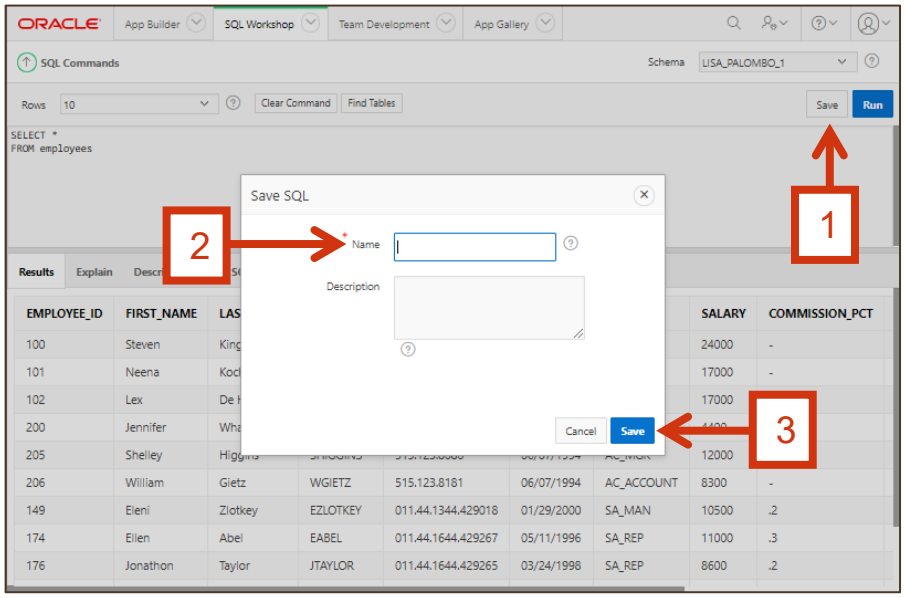
3. Click on the “Find Tables” button to see a list of table names.



7. Saving a SQL or PL/SQL Statement

To limit the number of times you enter a common SQL or PL/SQL statement, save the statement by clicking the Save button. To save the SQL commands:

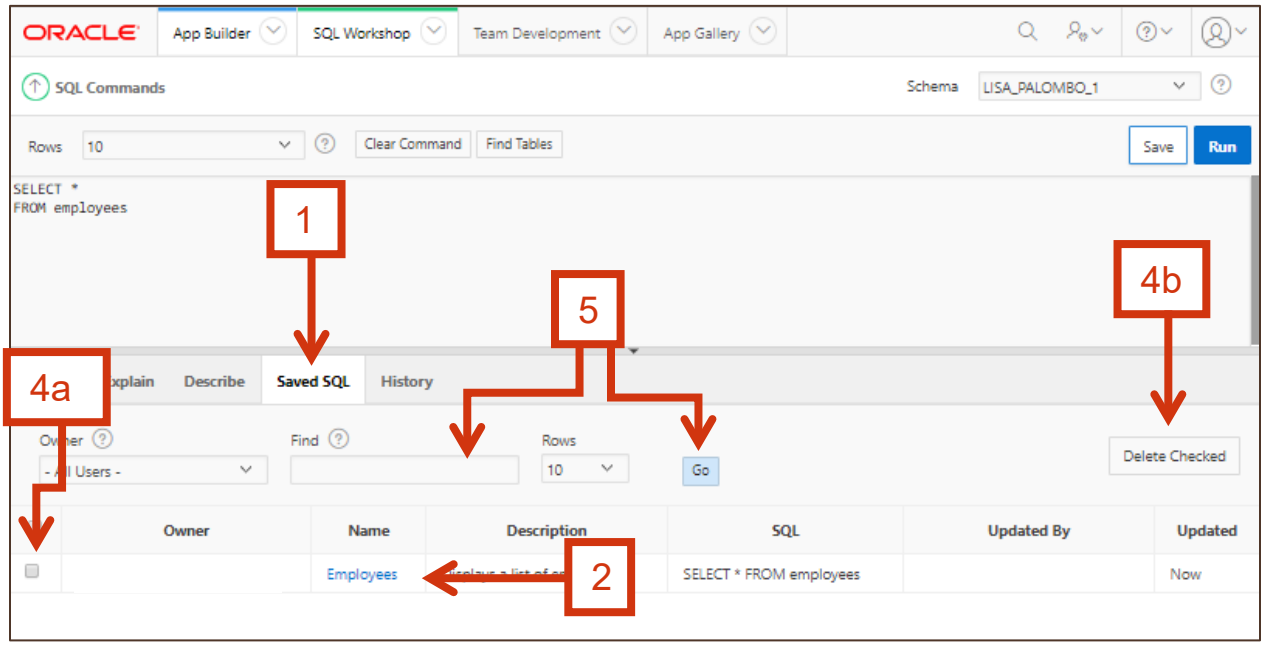
1. Click on the 'Save' button in the SQL command window.
2. A pop-up window will appear where you can enter the name (mandatory) and description (optional) of the file.
3. Click the Save button when done.



8. Accessing a Saved SQL or PL/SQL Statement

The saved SQL or PL/SQL commands can be accessed, executed, modified and deleted (See Graphic Below).

1. To display the list of saved SQL or PL/SQL commands: click on the "Saved SQL" tab.
2. To execute a saved SQL or PL/SQL command: click on the "Name" of the saved SQL or PL/SQL command. You will see it displayed in the statement window. You can now click on the "Run" button to execute these commands.
3. To edit a saved SQL or PL/SQL command: click on the "Name" of the saved SQL or PL/SQL command. You will see it displayed in the statement window. Edit the command, as needed then click on the "Save" button. The pop-up window will contain the original information. You can either keep it or edit the information or save to a new filename.
4. To delete a saved SQL or PL/SQL command:
   a. Click on the box in front of the name of the saved command you wish to delete,
   b. Click on the "Delete Checked" button.
5. To search for a SQL or PL/SQL command: enter a key word in the "Find" box, then click on the "Go" Button.



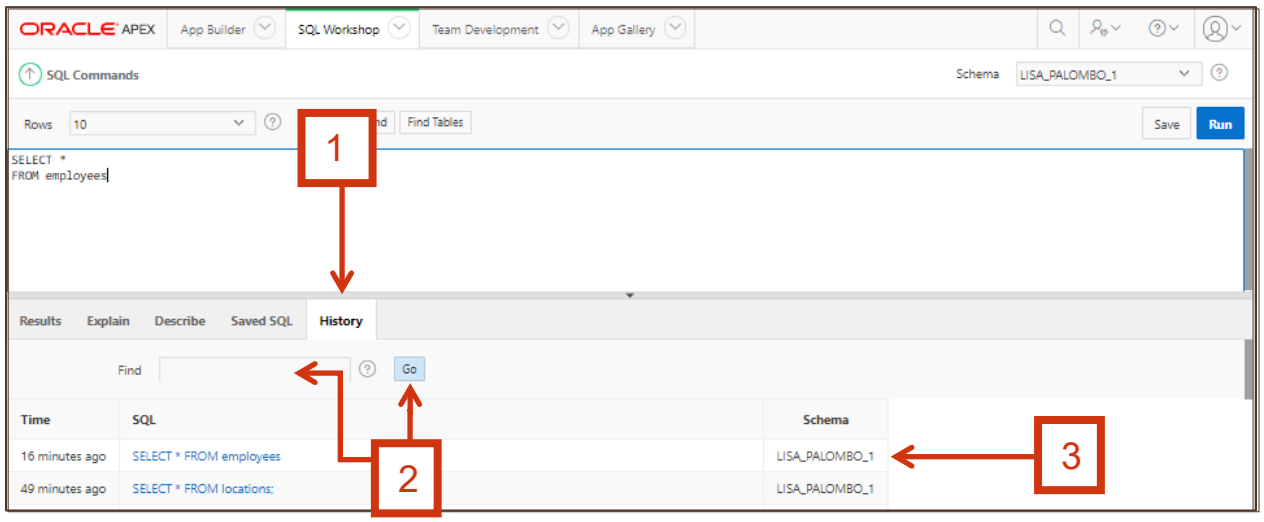
9. Using the History Option

A list of the latest run SQL or PL/SQL commands are kept in History. By default they are listed the most recently run commands. There are different options to note in the History window.

1. Click on the “History” option.

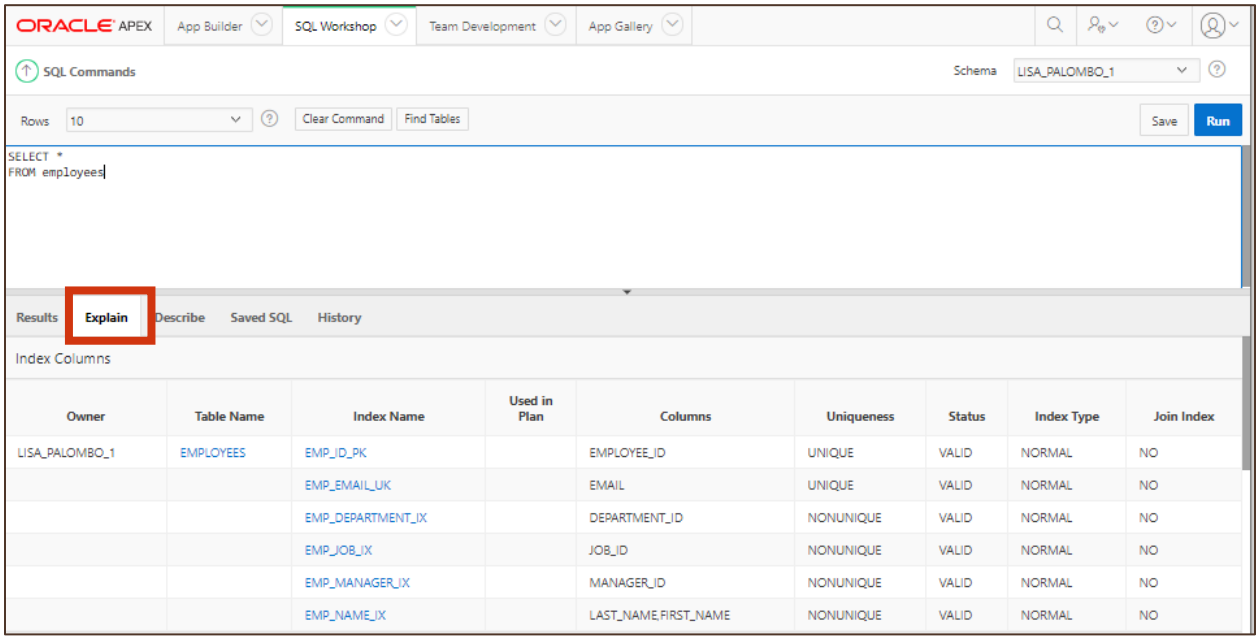
2. To search for a previously used command: Enter a key search word in the “Find” box then click on the “Go” button.

3. To re-execute the SQL or PL/SQL command: Click on the SQL or PL/SQL you wish to execute. You will see it displayed in the Statement Window. Click on the “Run” button to execute the SQL commands.



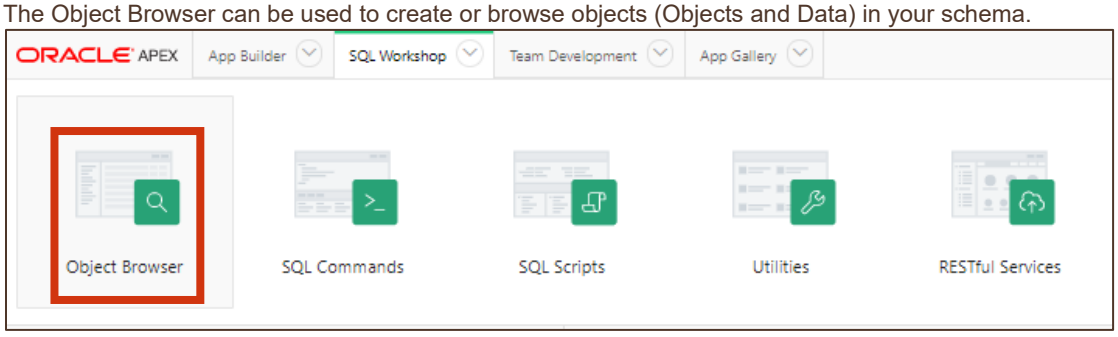
10. Using the Explain Option

Either type in a SQL or PL/SQL command in the “Statement” window or select a command from “History” or “Saved SQL”, then click on the “Explain” option to see a graphic explanation of SQL or PL/SQL command in the “Results” window.



11. Using the Object Browser tool from the SQL Workshop Component

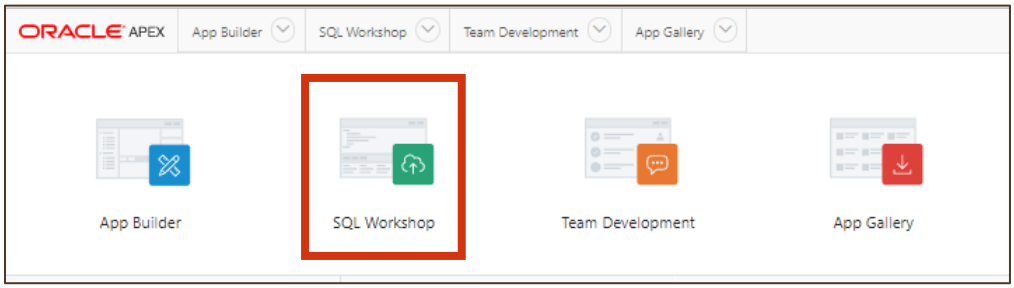
The Object Browser can be used to create or browse objects (Objects and Data) in your schema.



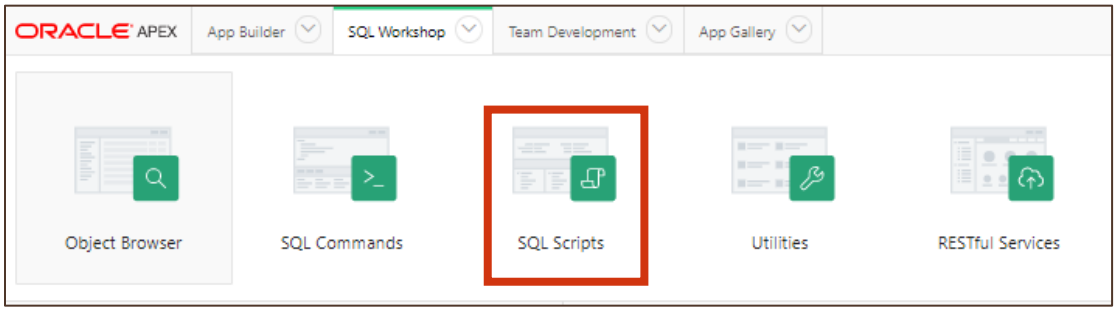
12. Using SQL Scripts tool from the SQL Workshop Component

The SQL Scripts tool can be used to view, create or upload SQL or PL/SQL scripts. A SQL or PL/SQL script is one or more SQL or PL/SQL statements that are executed sequentially. Each statement must have a semi-colon at the end of the statement.

To access the SQL Scripts page, click SQL workshop

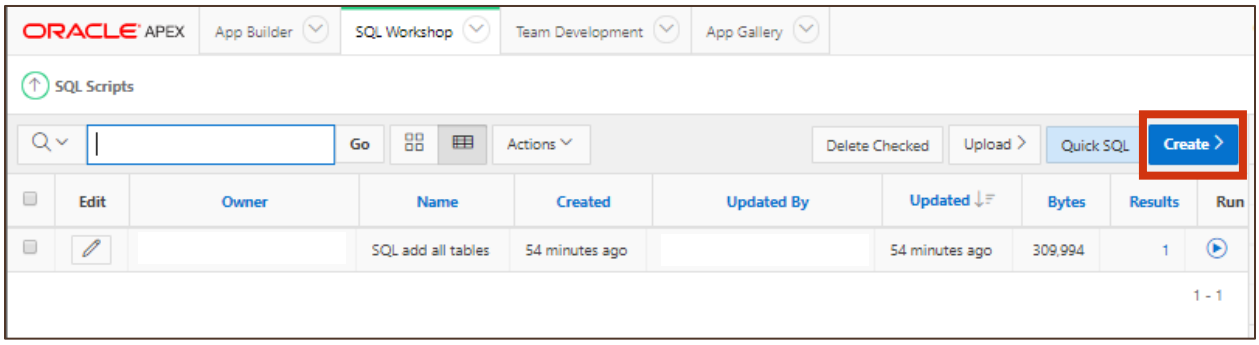


Click SQL Scripts



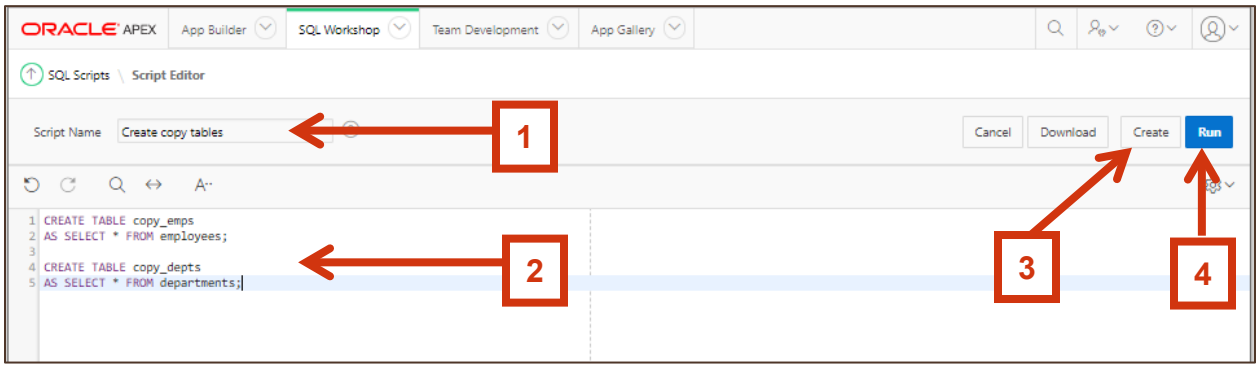
13. Creating Scripts

To access the script editor window you click the “Create” button from the SQL Scripts page.



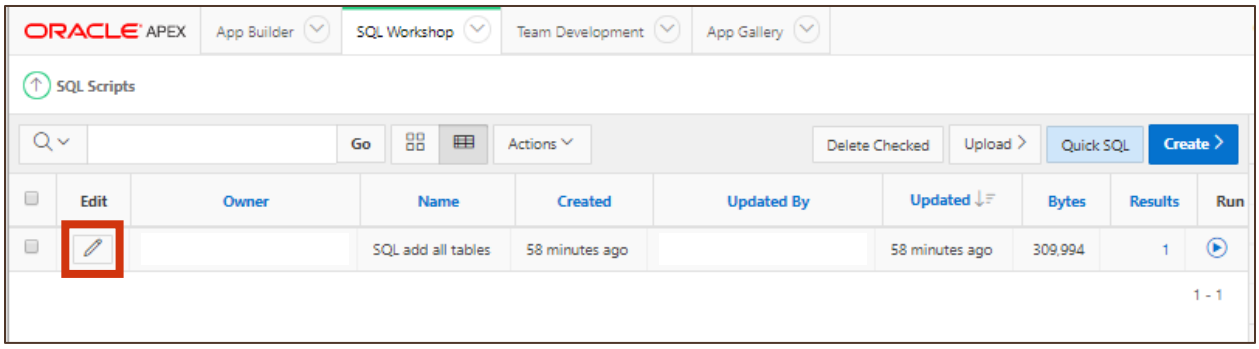
To create a new script:

1. Give your script a name
2. Enter in the SQL or PL/SQL commands
3. Click “Create” button to save your script
4. Or Click “Run” button to execute your script

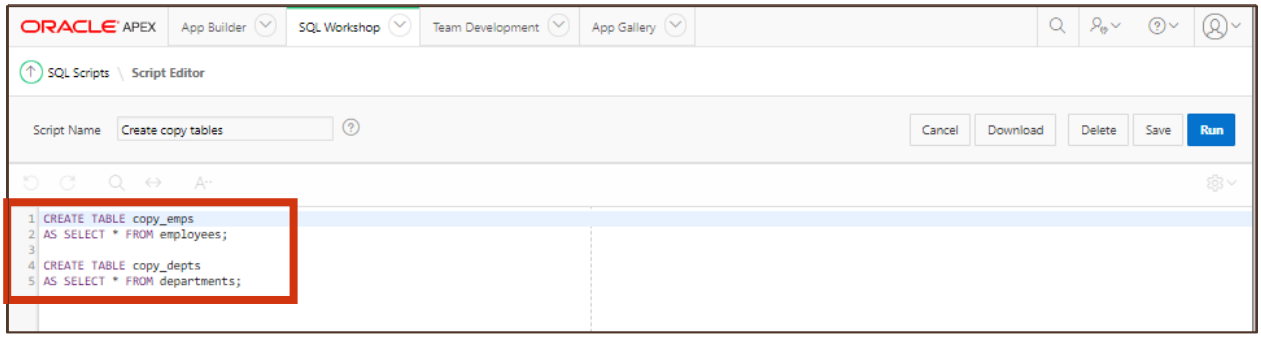


14. Viewing Scripts

To view scripts loaded into the SQL Script tool, select SQL Workshop SQL Scripts. (As shown in step 11) and click on the Edit icon (pencil).

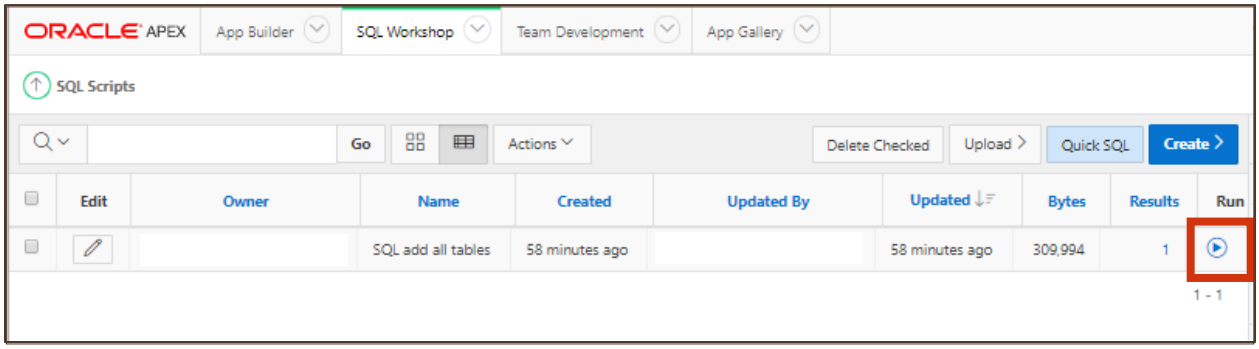


The contents of the script are displayed in the Script Editor window

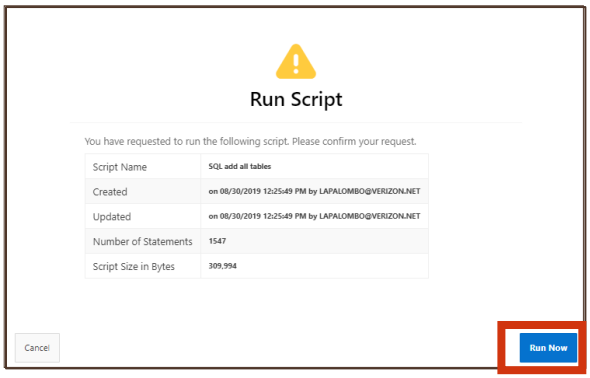


15. Running Scripts

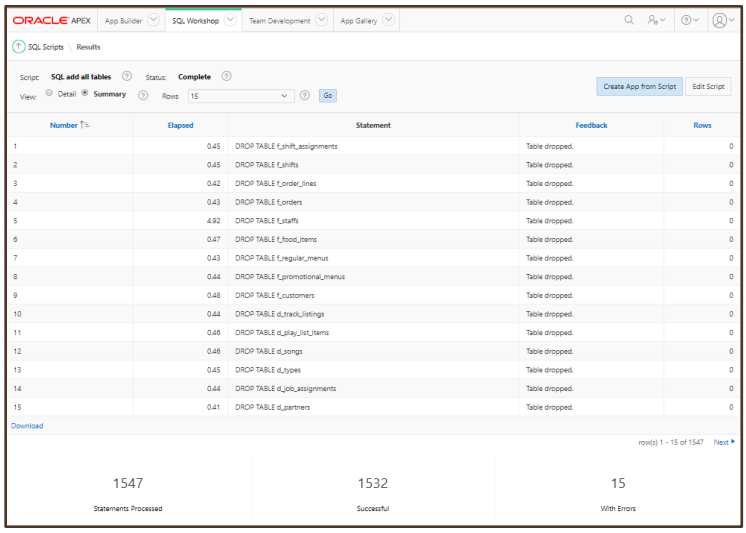
To run a script, click the “Run” icon next to the script you wish to execute.



Click the “Run Now” button.



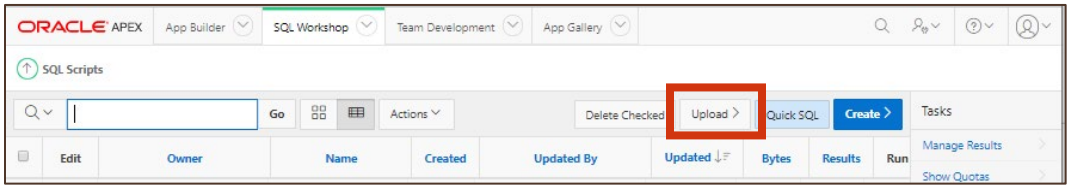
The following is a sample of the type of detailed results information you might see.



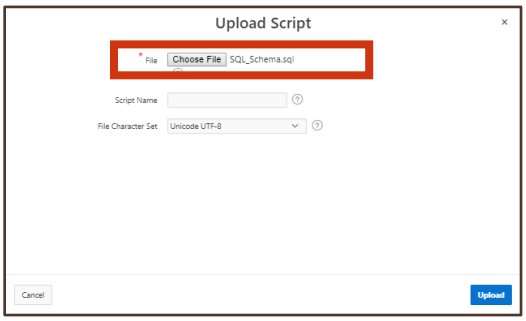
16. Upload Scripts

Before you upload a script into the Script Repository, you must first create it in a text editor on your desktop. When saving your script, make sure to save it as a .sql file. Sometimes programs will add an extension to your .sql and cause problems. For example, cre_dept.sql may sometimes be saved as cre_dept.sql.doc. If this is a problem, place double quotes around the title of the script when saving – “cre_dept.sql”.

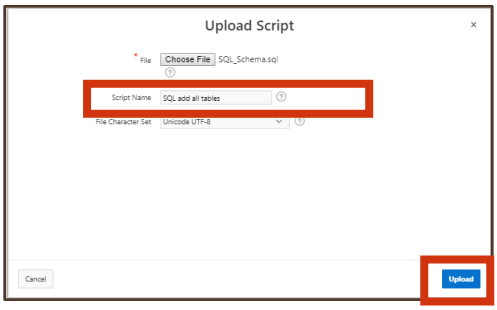
You can access the upload window by selecting “Upload” from the SQL Scripts page.



Click Choose File and navigate to the file on your PC.



Add a Script Name, leave “File Character Set” as default (Unicode UTF-8), and click “Upload”.



You will see the uploaded Script listed on the “SQL Scripts” page in addition to any Scripts that you created in APEX using the Script Editor.